William Foy

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EDUCATION

Carnegie Mellon University | B.S. in Electrical and Computer Engineering — Pittsburgh, PA
Intended Minor in Computer Science, QPA: 3.9/4.0 — Expected May 2022

RELEVANT COURSEWORK

Introduction to Electrical and Computer Engineering
Introduction to Computer Systems
Introduction to Android Development
Principles of Imperative Computation
Functional Programming
Concepts of Mathematics

INDUSTRY EXPERIENCE

Booz Allen Hamilton | Reverse Engineering Intern — Fort Meade, MD
Summer 2019

- Performed full security analysis on network-attached storage device
- Reverse engineering of firmware update binaries
- Automation of custom firmware modification

Booz Allen Hamilton | Cybersecurity Intern — Fort Meade, MD
Summer 2018

- Performed security audit on a commercial mesh Wi-Fi router
- Exploited multiple web client vulnerabilities

PROJECTS

Research Assistant at CMU Robotics Institute — Pittsburgh, PA
Fall 2019

- Testing of Husky UGV performance and energy consumption
- Development of UGV control GUI using Python with PyQT

Defense against Quadcopter Security Vulnerabilities — Aberdeen, MD
Fall 2017 - Spring 2018

- High School Capstone Project with Booz Allen Hamilton mentor
- Implemented WPA2 Wi-Fi protocol and SSH server onboard Parrot AR.Drone 2.0
- Cross-compiled software for ARM, including wpa_supplicant and Dropbear

Autonomous Racecar Project (MIT Beaver Works Summer Institute) — Cambridge, MA
Summer 2017

- Developed software for miniature racecars to navigate an obstacle-filled course
- Utilized control systems and computer vision through integration of Python with ROS

SKILLS

Languages: C/C++ ▪ Java ▪ Bash ▪ Python ▪ HTML ▪ CSS
Tools: Git ▪ Unix ▪ Vim ▪ LaTeX
Software: Ghidra ▪ IDA ▪ ROS ▪ Android Studio

EXTRACURRICULAR ACTIVITIES

Scotty Labs

- Project lead on development of mentor queue system for TartanHacks 2020

Plaid Parliament of Pwning (PPP) at Carnegie Mellon University

- Participation in Capture-the-Flag competitions

Carnegie Mellon Racing

- Aided in development of firmware for Formula SAE electric racecar
- Worked with RTOS and PWM signals for fan speed control

HONORS

College of Engineering Dean's List, Fall 2018 and Spring 2019